OPERATING INSTRUCTIONS

QUADX GENERATOR INSTRUCTIONS BWL-0335/2 (08/05)
BOWENS INTERNATIONAL LIMITED

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the power behind the picture™

QUADX
i m a g i n g   p o w e r

Model Number	BW-7600
Stored Energy (Max)	3000Ws Channel A only. Or, Split 2000Ws (CHA) + 1000Ws (CHB)
Supply Voltage AC	100-250V AC 50 or 60Hz
Stabilisation	±0.1 f-stop
Modelling Lamps	4 x Max 650W
Typical Recycle Time (Full Power 230V 50Hz)	2 Seconds - 240V AC 50Hz 2.6 Seconds 120V AC 60Hz
Overload Protection	15A Thermal Breakers for Charge and Modelling
Ready Indication	Green 'READY' LED at 100%, Audible 'READY' Beep or Modelling light indication as selected.
Modelling Power Control	Off / Proportional / Independent / 100% / Automatic 100% plus bias control
Nominal Sync. Voltage	6V
IR Remote Control	Full control, 12 Channels Number depends on transmitter
Photocell	On / Off
Sounder	On / Off
Flash Power Control	6.6 f-stop in 1/10 increments, scaled 10 = 3000Ws
Guide Number Full Power, 50º Keylite ISO 100	175 (UV Coated Tube)
Flash Duration	1/1430s (Full Power) t=0.5, Approximate value indicated.
Flash Colour Temperature	Approx. 6500K (UV Coated)
Recommended Flash Head	QUADX Head (BW-7660)
Length	360mm (14½")
Width	180mm (7")
Height	370mm (14½")
Weight	11.6Kg (25.5lbs)

Due to our policy of constant product improvement, Bowens International reserves the right to change equipment specifications at any time and without notice.

WARNINGS & FAULT FINDING

If the unit appears to have developed a fault, first establish that it is a genuine internal fault and not a case of normal operation such as overheat. Carry out the following checks to eliminate any external causes. If no obvious problem can be found and replacement of the modelling lamp, flash tube or fuse does not effect a cure then it is likely that an internal fault has developed. Always return the unit to an authorised service centre if a fault is suspected after these checks. UNDER NO CIRCUMSTANCES SHOULD YOU ATTEMPT ANY REPAIR yourself.

Flash/Misfire Warning

Following a flash, the unit will temporarily display READY on the red numeric displays for 5 seconds. This serves as a convenient method of showing correct pack operation when two or more packs are running flashing together. If the unit receives a trigger signal from any of the valid sources (TEST, IR REMOTE, IR TRIGGER, SYNC) but fails to flash for any reason then the red numeric will display "headfail". Press – to clear the message. Increase the power setting to maximum and use the TEST button to try and flash again. If the problem continues to happen on more than the odd occasion, particularly at lower power settings, then it is likely that the flash head tube is wearing out. Before replacing the tube, check that the trigger wire is correctly connected and is not shorted to or in close proximity to the metal reflector. If the unit fails to flash at all then check the flash tube for signs of damage or overheating.

If the unit fails to flash and the display warning is not given then the Sync. lead and/or camera should be suspected. If possible check these with another flash system. Check the polarity of the Sync. from the camera and use an adapter to reverse it if necessary. The QuadX 3000 supplies a SYNC. voltage of +5V with respect to the chassis Ground.

OVERHEAT Warning

The unit is fitted with overheat protection that inhibits charging until the unit has cooled sufficiently. The display flashes the READY LED and displays a warning message on the LCD while the overheat condition exists. Overheat will normally only occur if the unit is flashed repeatedly at a fast repetition rate. Slowing down the repetition rate will normally help keep the unit out of overheat. Dimming the modelling lamp or turning it off may also help.

NOTE: The controls are inhibited during overheat to prevent inadvertent changes being made. The overheat condition remains until the pack reaches a target lower temperature or is turned off and then on after the pack has cooled by a few degrees.

The Control Panel Does Not Light

If the control panel does not light when the unit is switched on then first check that the AC power supply to the unit is OK and that the thermal resets buttons on the rear are set. Under exceptional conditions of use the internal fuse may blow. This is normal and is designed to protect the unit. Report the problem to your local service agent. Do not attempt to locate and replace the internal fuse.

The Control Panel Lights but Does Not come To 'READY'

If this happens then first confirm that the AC power supply is adequate and within the prescribed limits. Try switching the unit off, wait a minute, and then switch on again.

Dear Customer,

Thank you for choosing the Bowens QUADX 3000 Generator.
Accurate, powerful and simple to use, the QUADX has been designed by working closely with photographers to develop a system that meets the standards demanded in professional photographic studios.
All 'S-Type' accessories from the Bowens range can be used with the QUADX head. For details of all related products, please contact your local distributor, a list of which can be found at www.bowens.co.uk.
In order to obtain the full benefit from your purchase, please take a few moments to familiarise yourself with this user manual.
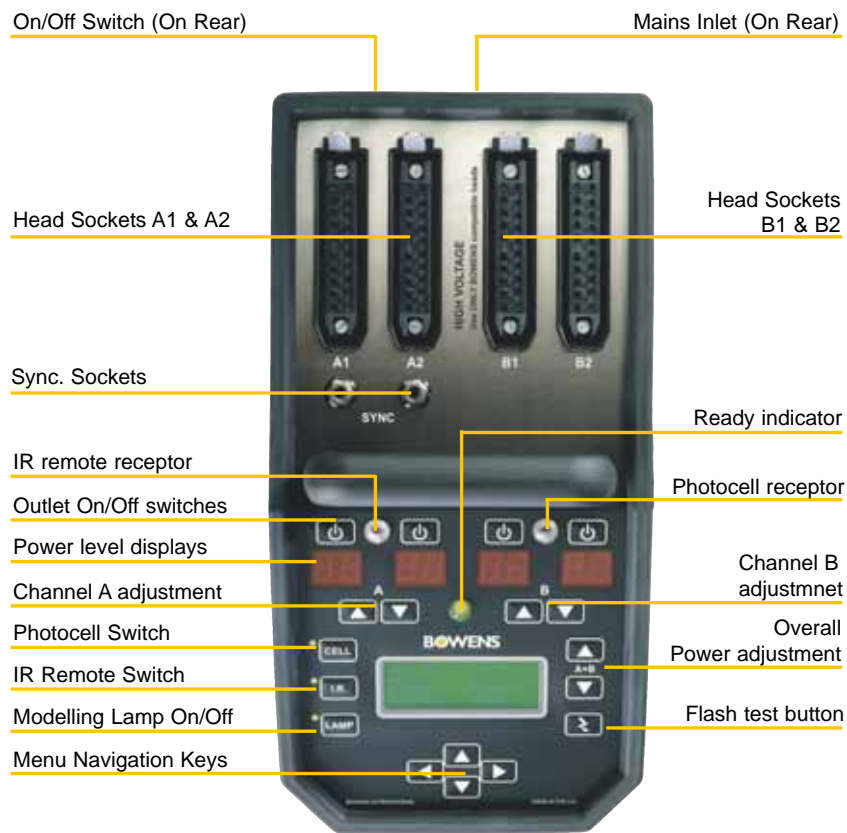
Thank you.
Bowens International Ltd.

DO NOT:
- Use in an environment where moisture or flammable vapor might come in contact with the unit.
- Insert or remove flash heads without first switching off.
- Restrict air vents while in use.
- Use a unit with damaged housing, moldings, flash tube or modelling lamp. If the unit is dropped or damaged in any way, always have it checked out before using.
- Operate the unit without a safe grounded (earthed) AC supply.

DO:
- Switch power off and disconnect from the supply before changing modelling bulb or flash tube.
- Excercise care when handling equipment that has been in use. The reflector and front end of the flash head can become Very Hot.
- Observe the mains supply requirements.
- Avoid placing cables where they can be tripped over. Protect from heavy, sharp or hot objects, which may cause damage and replace damaged cables immediately.
- Due to the high voltage / high energy used in QUADX Units, all servicing must be carried out by an authorised Service Centre.
- Remove the power cord by gripping the plug. NEVER pull the cord.
- Ensure that any extension cord used has a suitable current rating to prevent overheating and never use coiled extension cords.
- ALWAYS remove the flash head covers before using.

On/Off Switch (On Rear)

Mains Inlet (On Rear)

Head Sockets A1 & A2

Head Sockets B1 & B2

Sync. Sockets

Ready indicator

IR remote receptor

Photocell receptor

Outlet On/Off switches

Power level displays

Channel B adjustmnet

Channel A adjustment

Photocell Switch

Overall Power adjustment

IR Remote Switch

Modelling Lamp On/Off

Flash test button

Menu Navigation Keys

The QUADX displays information about the power available at each socket by means of four Red LED numeric displays. In addition, this information is converted to Ws data and shown on the LCD display.

Each red numeric display is aligned with an associated outlet socket. Most of the QUADX controls are aligned with the associated socket. Looking at the sloping control panel area, from the handle there are four On/Off toggle switches. These switch the channels on or off if a head is plugged into the socket.
The red numeric display will show -- when off and will be blank if there is no head plugged into the socket.

Beneath the red displays are two pairs of adjustment buttons. These control the power available from the channel socket pairs A1/A2 and B1/B2.

To the left of the display screen there are three toggle controls to switch the photocell, I.R remote and modelling on or off.
To the right of the screen there is a pair of adjustment buttons to raise or lower the power from channels A & B, keeping them in ratio. Beneath these buttons is the Open Flash test button.
Beneath the screen are 4 menu navigation buttons.

120° Wide-Angle Reflector. **BW1885**

50° Keylite Reflector. **BW1886**

High Performance Reflector. **BW1878**

75° Softlite Reflector. **BW1899**

40° Sunlite Reflector. **BW1868**

65° Maxilite Reflector. **BW1887**

Grid Reflector. **BW1863**

Backlite Reflector. **BW2560**

Visit **www.bowens.co.uk** for the widest range of photographic lighting accessories

Pulsar Radio Trigger System

With the Pulsar Radio Trigger system you can free yourself from trailing sync cables.

This multifunctional device can be used to trigger flash units, film and digital cameras and light meters up to 100m away.
Because Pulsar is a radio transmittor, rather than IR, it allows for triggering around corners or through walls and is not affected by high ambient light situations. Choose from four individual channesl and six studio selectors, each providing a unique ID for different flash devices or combine them to trigger all equipment within a given setup or studio.

Because of its low-voltage operation, it is perfect for digital cameras. Each unit can be used as either a transmitter or receiver and operates from two AAA batteries.
Pulsar (**BW-5150)**

The fan-cooled QUADX flash head is capable of handling up to 3000Ws and is fitted with 650W modelling lamp.

The user changeable flash tube features a three-electrode design to deliver the fastest possible flash duration. A UV-balanced Pyrex dome ensures colour integrity and security. When combined with the full line of Bowens S-type reflectors and accessories this system will give you unmatched lighting versatility and unlimited creative capabilities.

To prolong the life of the flash head Bowens generators incorporate soft-start circuitry which dim the lamps up and down rather than abruptly powering them on and off.

BW7650

RingLite

This classic lighting accessory gives a unique full-frontal lighting effect that makes it popular among fashion photographers.

The camera mounts to the center of an opening that is surrounded by two semicircular 1500Ws flash tubes to acheive amazing results. To ensure short, freeze-action flash duration, the flash tubes have three, rather than two, electrodes and each has a seperate cable. The Ringflash can be used with any QUAD generator and its integral mounting bracket adjusts for use with virtually all medium format, and 35mm camera.

BW7660

For refined lighting effects, two quite different reflectors are available.

Ringflash High-Intensity Reflector
This reflector increases the overall size of the light source, intensifying the light output.

BW2310

Ringflash Diffuser
For a softer lighting effect, this opal diffuser can be used with the Ringflash. This will soften the shadows and is perfect for most direct lighting applications.

BW2311

Your QUADX 3000 is a versatile and powerful photographic generator.

Flash Power
The pack has four head sockets which can deliver a total power of 3000Ws in various ways. At all times, the pack will indicate the available power at any socket. This is scaled such that 3000Ws is represented as 10 on the display. Lower power levels are proportional and adjustable in steps of 0.1 stops. e.g. A value of 9.0 represents half the power, 1500Ws.

The pack is divided into two channels, A & B. These channels are further split across two sockets each, A1/A2 & B1/B2. The energy available from each socket is displayed. Switching off a socket will unit to dump the energy in order to maintain the remaining channel/socket. There is no need to manually accomodate these changes.

With Channel A in use only, the full pack power is available to share between sockets A1 and A2. Therefore a single head in A1 can discharge the full 3000Ws.

With a head switched off in either of the Channel B sockets B1/B2, the pack automatically becomes asymmetric. In this mode, a maximum of 2000Ws is available across channel A and a maximum of 1000Ws across channel B.

As you become familiar with operating the pack, you will notice short pauses in the unit returning to ready during power adjustments. This is because the unit always adjusts the power level to match the displayed value for each socket. Turning a socket off, for example, requires the energy to be dumped, hence the delay. A further reason is that for any given power level, the unit will automatically optimise the internal capacitor useage to minimise the flash duration.

Modelling Power
Modelling On/Off is controlled by a single button. Modelling control to each head can be set to On/Off or Intermittent. (Intermittent extinguishes the lamps when the unit is not ready)

There are three modelling modes, Full, Proportional and automatic 100%.
The Full and Automatic 100% modes also provide a bias control allowing all lamps to be controlled in ratio.

Main Selection Controls
The commonly required adjustments are grouped under the "Main" selection menu.
This allows control over the following;-

1.   Modelling.
2.   Speaker.
3.   IR Channel.
4.   Bracketing.

Advanced Options

The QUADX features a number of advanced options. These are accessed by selecting "Advanced Options" from the 'Main" selection menu.

The following is a brief list of features available, which are described in greater detail in section 6.

1.	Speaker Set-up.	- Control Ready, Error and keypad tones.
2.	Alternate Unite.	- Choose to siplay power in Joules (Ws) or as a percentage.
3.	Brightness.	- Control the display brightness.
4.	Time Out Settings.	- Control the time before Auto-return to the main menu.
5.	Save/Recall	- Store and retrieve pack settings.
6.	Charge control	- Switch between Auto and Slow charge rates.
7.	Set-up Flash Mode	- Set Trigger Delays, Skip Triggers and Multiple Triggers.
8.	Reset Job Counter	- Clear the job count.

Triggering System

The unit may be triggered from the following sources.

1.   A Sync. plug in either of the ¾" jack-type sockets will trigger the pack if the 'READY' LED is lit. The sync. supply is nominally +5V for low voltage camera operation. These sockets may also be used with a Radio Trigger, Such as the Bowens Pulsar, or I.R triggers to provide a syncronous trigger.

2.   Test/Open Flash button. The unit will only flash if the unit is charged and the 'READY' LED is either lit or flashing.

3.   Remote Photo Cell. When switched on, the unit will trigger in response to an external flash of light, if the 'READY' LED is lit. Ensure that the sloping panel is exposed clearly to the triggering light source.

4.   I.R Remote Control Test. With the I.R receiver switch, the unit can be triggered by the open flash test button on the I.R Handset.

Adjust the FLASH and MODELLING controls to provide the desired settings and select any options required. Refer to the section on operation of the controls if required. Test flash the unit by pressing the 'TEST' button.

Excess energy is automatically dumped when the flash power setting is reduced. Both increasing and decreasing the power setting generates heat inside the unit. Therefore avoid repetetive Up and Down power changes.

Refer to page 12 if you intend to make continuous use of the fast recycling feature of the unit.

NOTE: If the unit is left unused for six months or predominantly used at low power settings it is recommended that the power be increased to maximum and the unit left switched on occasionally for at least 30 minutes to help preserve the life of the capacitors.

Advanced Options ▶ Setup Flash Mode ▶ Multi-Trigger.

The Multi-Trigger Mode allows the pack to fire a multiple number of times following a single trigger signal. The number of times the pack will fire can be set in the range 2 - 50. In addition, the time between firing may also be set between 0.1 and 0.9 seconds.

Note that the user must ensure that the pack will recharge within the time specified as otherwise it will not be READY and will not fire as expected.

Selection and adjustment is performed using the ▲ & ▼ keys to scroll and ▶ to select.
The > character changes to * when an item is ready to change.

Advanced Options ▶ Reset Job Counter.

The QUADX pack has two flash counters. The total flash counter, which can not be modified by the user and the job counter. Both counters increment on every attempted flash.

The job counter may be used to record the number of flashes over a particular period by resetting its value to zero before a session and then reading the value after the session.

To view the counter select:

Advanced Options ▶ Reset Job Counter

To reset the job counter press ▼ .

Advanced Options ▶ Setup Flash Mode
This mode contains three advanced features.

Trigger Delay, Trigger Skip and Multi-Trigger. These features may be operated standalone or in conjunction with one another.

Advanced Options ▶ Setup Flash Mode.
Use the ▲ & ▼ keys to select.

HINT: Whenever a flash mode is enabled, the default menu will show Progmd on the default menu in order to show a mode is in place.
All modes are switched OFF after powering off the unit.

```
FLASH MODE CONTROLS
 > TRIGGER DELAY OFF
   TRIGGER SKIP  OFF
   MULTI-TRIGGER OFF
```

Advanced Options ▶ Setup Flash Mode ▶ Trigger Delay
The Trigger delay function allows a timed delay between triggering the pack and the pack discharging. The feature may be toggled ON or OFF and the delay period may be varied from 0 to 9.9 seconds in steps of 0.1s. Selection and adjustment is performed using the ▲ & ▼ keys to scroll and ▶ to select.
The > character changes to * when an item is ready to change.

Advanced Options ▶ Setup Flash Mode ▶ Trigger Skip
The Trigger Skip function is solely for use with two or more packs and is designed to allow the photographer to trigger packs alternately and therefore more rapidly. To do this, the pack must first be assigned a pach ID number, which must be less than or equal to the number of packs in use. Next, the number of packs must be set to equal the number of packs to be used. Each pack must be connected to the same trigger source. As a trigger signal occurs the pack will begin counting the number of triggers. If this is equal to the pack ID, then the pack will trigger.

e.g. Consider three packs set up with Pack ID 1, Pack ID 2 and Pack ID 3.

Having switched on the Trigger Skip function, the first trigger will cause pack 1 to fire, the second trigger will cause pack 2 to fire, the third trigger will cause pack three to fire. The fourth trigger will cause pack 1 to fire and so on...

Remove packaging and ensure the unit is switched off.

Set-up a flash head, ensuring the protective cap is removed and the modelling lamp is switched on.

Plug the head into socket A1.

Note: Locate the tapered part of the socket first, then press down on the cable and ensure the socket 'clicks' into place properly as pictured.


1. Switch the pack on. The unit will show one red display. If -- is shown, press the socket A1 On/Off button to turn the socket on.

2. The pack will now change to a level proportional to the setting shown on the left most red numeric display.

3. Use the channel A adjustment buttons to vary the power level from socket A1. Adjust the unit to show 10 on the display. Use the open flash button to discharge the 3000Ws.

4. Switch the pack off. Plug the head into socket B2. This time the rightmost numeric display will illuminate. Adjust the channel power up to its maximum, noting that it will stop at 8.4. This is because the pack becomes asymmetric with any head switched on in channel B.

    You are now ready to begin using the pack.

The QUADX has a three tier menu which is simple to use and operate. The menus are selected using the four navigation keys on the control panel.
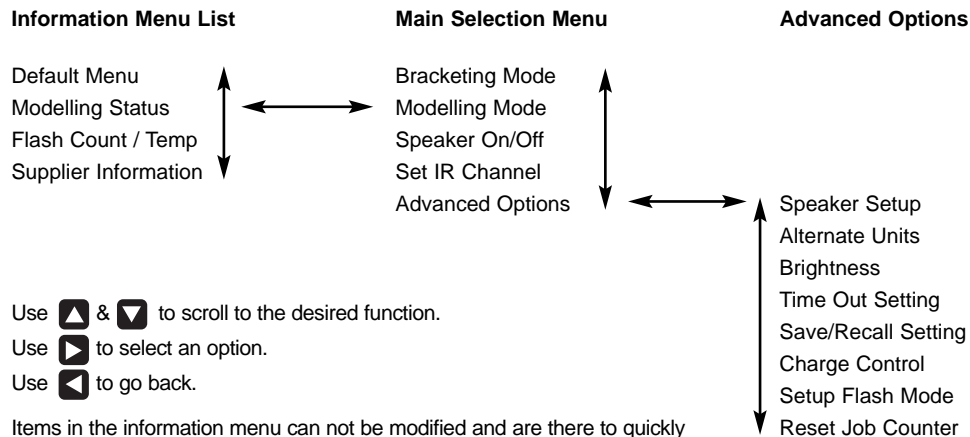
At switch on, the unit displays the DEFAULT MENU. This shows the following information:

```
A1 Only     CHB Off
250J        ********
1/1430      ********
Mod 100%    Normal
```
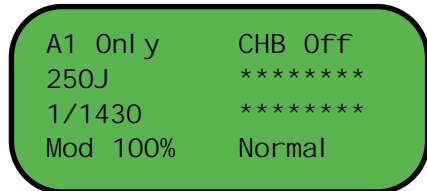
Socket Status
Energy per socket
Expected flash duration per head
Modelling = 100% and Mode = Normal

HINT: Remember to get back to the DEFAULT MENU, just keep pressing the ◀ key.

The menu structure is arranged as shown below.

Information Menu List

Default Menu
Modelling Status
Flash Count / Temp
Supplier Information

Main Selection Menu

Bracketing Mode
Modelling Mode
Speaker On/Off
Set IR Channel
Advanced Options

Advanced Options

Speaker Setup
Alternate Units
Brightness
Time Out Setting
Save/Recall Setting
Charge Control
Setup Flash Mode
Reset Job Counter

Use ▲ & ▼ to scroll to the desired function.
Use ▶ to select an option.
Use ◀ to go back.

Items in the information menu can not be modified and are there to quickly view the main settings.

From the information menu, modelling is always selected as the first item in the main selection menu.

Pressing ▶ at each section allows values to be changed.
Use ▲ & ▼ to modify values. ◀ when set.

**HINT: The easiest way to learn the menu, is to play with the system to see whats there.
You can't damage anything.**

Advanced Options Menu

Advance Options ▶ Brightness
This option allows the brightness of the Red numeric displays to be altered.

Advanced Options ▶ Brightness. Use ▲ & ▼ to adjust the brightness level 1-9.

Advance Options ▶ Time-Out Setting.
This option allows the unit to automatically revert to the default menu after a preset number of seconds. Additionally, if the value is set to 0, the unit will never time-out to the default menu and will rely on the user pressing the ◀ button to go back.

Advanced Options ▶ Time-Out Setting. Use ▲ & ▼ to adjust the value 0 or 3 - 30 seconds. (Values 1 & 2 are not available)

HINT: Holding down the ▲ & ▼ keys will auto-increment the values.

Advanced Options ▶ Save/Recall Setup
This option allows the unit settings to be saved to the memory or loaded back from the memory. Additionally the factory default settings may be loaded.

To Save (Store) the current pack settings:

Advanced Options ▶ Save/Recall Setup. Use the ▲ & ▼ keys to select "Save to Memory". Press ▶ to SAVE the pack settings and return to the Advanced Options Menu.

To Load (Recall) the current pack settings:

Advanced Options ▶ Save/Recall Setup. Use the ▲ & ▼ keys to select "Load from Memory". Press ▶ to LOAD the pack settings and return to the Advanced Options Menu.

To restore the pack factory settings:

Advanced Options ▶ Save/Recall Setup. Use the ▲ & ▼ keys to select "Restore Defaults". Press ▶ to RESTORE the pack settings and return to the Advanced Options Menu.

Advanced Options ▶ Charge Control.
This option allows the unit to either charge automatically acheiving the fastest possible charge rate OR allows the selection of a SLOW charge rate.
In using the pack, the user must consider the electrical load placed upon the mains supply. As a worst case with four heads plugged in using 650W of modelling each, the mains supply could be overloaded with continual fast charge cycling. In such cases, switch to SLOW charge or use the lamps in intermittent mode, so that the loading is reduced during charge cycles.

To adjust the charge control:

Advanced Options ▶ Charge Control. Use the ▲ & ▼ keys to toggle Auto / Slow Charge.

The Advanced Options Menu offers the ability to control and adjust the following functions.

1.   Speaker Set-up.
2.   Alternate Unit.
3.   Brightness.
4.   Time Out Settings.
5.   Save/Recall
6.   Charge control
7.   Set-up Flash Mode
8.   Reset Job Counter

```
ADVANCED OPTIONS
      RESET JOB COUNT
>  SPEAKER SETUP
      ALTERNATE UNITS
```
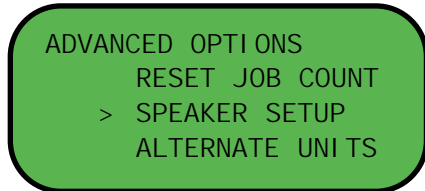
Menu Navigation within the advanced menu is consistent with other menus.
Use the ▲ & ▼ keys to navigate to the options of choice. Use   to select the option.
Use ▲ & ▼ to modify the parameters.

Advanced Options ▶ Speaker Setup.
This option allows the tone and duration to be adjusted for the Error Tone, the Ready Tone and the Keypad Tone. Each tone may also be individually turned On or Off.

Advanced Options ▶ Speaker Setup.
▲ & ▼ to scroll to the desired tone for adjustment. ▶ to select.
▲ & ▼ to scroll to the desired adjustment. ▶ to select.
The > will change to a * character to show that the value may be modified using the ▲ & ▼ keys.
There are 10 available tones. The duration is measured in steps of 0.1s in the range 1 to 30.

HINT: Holding down the ▲ & ▼ keys will auto increment the values.

Once the value has been modified, press ◀ to go back and accept the changes.

NOTE: Turning the speaker On or Off from the main selection menu will override the speaker On/Off settings if the speaker is switched from Off to On.

Advanced Options ▶ Alternate Units
This option allows the unit to display energy in terms of Joules or as a percentage of the total pack power.

Advanced Options ▶ Alternate Units
▲ & ▼ to toggle between Joules and Percentage.


The DEFAULT MENU shown here displays the following information.

Line one shows the socket status - Active / Off.
Line two shows the energy level per socket.
Line three shows the expected flash duration into a QUADX flash head.
Line four shows the modelling setup i.e. 100%, Auto or Proportional. Additionally the right column shows the mode of operation. This is always set to Normal at switch on and only changes when using the advanced programmed trigger sequences.

```
A1 Only      CHB Off
250J         ********
1/1430       ********
Mod 100%     Normal
```
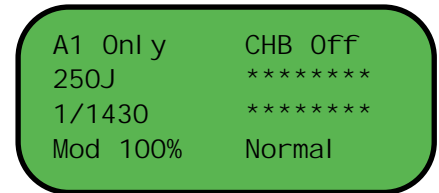
Pressing ▼ leads to the modelling status screen.
**Line two** indicates the individual lamp operating methods i.e. Continuous, Intermittent or Off.
Line three indicates the lamp mode: 100%, Auto 100% or Proportional.
Line four indicates whether any bias has been applied to the lamp settings. Ordinarily this is set at 100%, but in Auto 100% mode the lamps may all be dimmed in ratio by applying a bias.
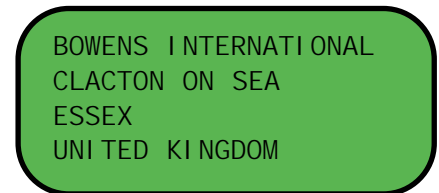
```
A1    A2    B1    B2
CONT  CONT  CONT  CONT
MODELLING MODE  100%
MODELLING BIAS  100%
```
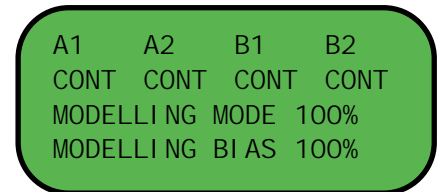
Pressing ▼ leads to the unit status screen.
This indicates the charge mode, the internal temperature of the capacitors, the total flash count for the pack, Infra-Red channel and software version.

```
AUTO CHARGE IN USE
CAPS 25°C CHRG 23°C
FLASH COUNT: 000001
IR CHAN=ALL S/W 1.0
```
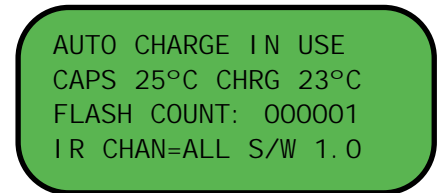
Pressing ▼ leads to the unit status screen.
This simply shows the supplier details.

```
BOWENS INTERNATIONAL
CLACTON ON SEA
ESSEX
UNITED KINGDOM
```

HINT: At all times, pressing ▶ will take you to the main selection menu.

The Main Selection Menu offer the ability to control and adjust the following common functions.

1. Modelling
2. Bracketing
3. Speaker On/Off
4. IR Channel

```
MAIN SELECTION MENU
    BRACKETING MODE
>   MODELLING MODE
    SPEAKER ON/OFF
```
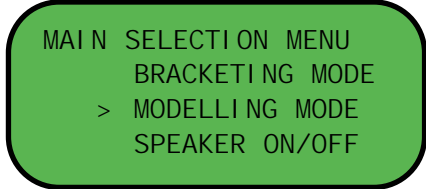
It also provides the entry point into the Advanced Menu. Menu choice is denoted by the > character which always defaults to Modelling when coming from the Information Menu.

To select an item, use the ▲ & ▼ buttons to scroll the screen until the > character is aligned with the item required.   Press ▶ to select the item.   The * character will move to indicate the new mode of operation.

Modelling.

Automatic 100% and Full (100%) have the further option to apply a dimming bias. Upon selection of these modes, press ▶ again to enter the bias control menu. From here use the ▲ & ▼ buttons to adjust the value.

In all cases use ◀ to go back.

Modelling Option Summary:

Modelling Mode	▶	Lamp Proportional	
Modelling Mode	▶	Automatic 100%	▶ Lamp Dimming Mode (Bias)
Modelling Mode	▶	Full (100%)	▶ Lamp Dimming Mode (Bias)
Modelling Mode	▶	Cont / Int / Off Modes	▶ Selection of A1,A2,B1,B2, All

If Cont / Int. / Off is selected, a new menu will be revealed to allow mode adjustment of each socket i.e. Continuous, Intermittent or Off. This is also reflected by the Red display.
Adjustment is made by pressing the right arrow key at each line of selection. The ALL value represents a quick way to adjust all the lamps together. This will change to USER SET if any lamp is set differently to any other.

Bracketing.

Bracketing allows three consecutive shots to be taken at power levels above, at and below the current setting level. The bracketing sequence may be arranged to start at a low power working upwards or alternatively may begin at a high power and work downwards. The forst thing to do when using bracketing is to ensure that you have set the bracket step. Scroll as follows:

Bracketing ▶ Set Bracket Step. Now use ▲ & ▼ to adjust the number from 0.1 stop to 0.9 stop. Press ◀ when set.

The unit is considered to be in Bracketing Mode when the display indicates Bracketing Options or Bracketing Mode. Under these conditions the unit will automatically check and warn if the selection is not possible within the existing setting constraints. A warning occurs if the bracket setup will take the unit outside of its normal operating range.

Bracketing Mode Example
As an example, assume a single head in socket A1 set for 7.0. First select 0.3 stop bracket step. Now select Low to High by scrolling and pressing ▶ .

The screen indicates the first flash will occur 0.3 stop below the present power setting and the final flash will be 0.3 stop above the present power setting. At any time, pressing ◀ will take you back and out of the bracketing mode.

```
BRACKETING MODE
START -0.3F NEXT
CENTRE 0.3F PENDING
FINISH+0.3F PENDING
```
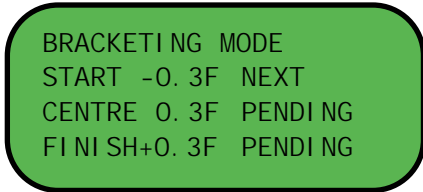
Speaker On/Off
This menu allows the speaker to be switched On or Off. Use the ▲ & ▼ buttons to toggle the speaker On or Off.

```
SPEAKER ON/OFF MENU

THE SPEAKER IS ON
```
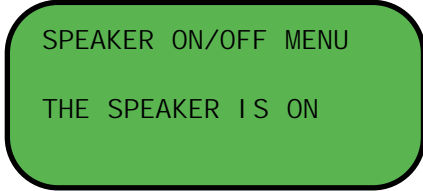
Set IR Channel
This menu allows the Infra-Red Channel to be adjusted. Use the ▲ & ▼ buttons to adjust the IR Channel. Setting ALL allows the unit to respond to any IR Transmitter.

```
IR CHANNEL SETUP
USE UP/DOWN TO MODIFY

CURRENT CHANNEL = 1
```
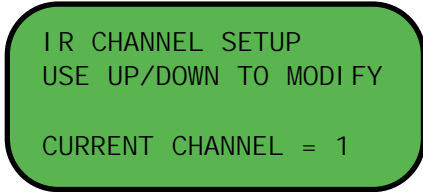
Advanced Options.
To select AdvanceD Options press ▶ from this menu. See Advanced Options Section for more information.

```
MAIN SELECTION MENU
    SET IR CHANNEL
>   ADVANCED OPTIONS
    BRACKETING MODES
```